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PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SURYA SAGI, DEBORAH R. MCMANUS,
WILLIAM G. HART JR., and BRUCE BARROWS

Appeal 2009-004116
Application 10/694,503¹
Technology Center 2100

Decided: June 3, 2010

Before JAY P. LUCAS, THU A. DANG, and JAMES R. HUGHES,
Administrative Patent Judges.

HUGHES, *Administrative Patent Judge.*

DECISION ON APPEAL

¹ Application filed October 24, 2003. The real party in interest is Pitney Bowes, Inc. (Br. 2.)

STATEMENT OF THE CASE

The Appellants appeal from the Examiner's rejection of claims 1-16 under authority of 35 U.S.C. § 134(a). The Board of Patent Appeals and Interferences (BPAI) has jurisdiction under 35 U.S.C. § 6(b).

We affirm.

Appellants' Invention

Appellants invented data gathering system and method for monitoring, gathering, storing, and processing machine data for a machine or group of machines (production system). The system and method entail a controller gathering machine data, storing the machine data in a compressed format in a storage system, and a "data pump" processing the compressed data. (Spec. 1, ll. 11-14; 4, l. 6 to 7, l. 7.)²

Representative Claim

Independent claim 1 further illustrates the invention. It reads as follows:

1. A system for gathering and transmitting detailed inserter machine data to one or more clients, the system comprising:

an inserter controller gathering machine data, the controller programmed to gather predetermined machine data comprising substantially all significant machine data from machine sensors and control routines;

² We refer to Appellants' Specification ("Spec.") and Second Corrected Appeal Brief ("Br.") filed September 10, 2007. We also refer to the Examiner's Answer ("Ans.") mailed December 12, 2007.

a journal storage system configured to store machine data gathered by the inserter controller in a compressed format;

a data pump configured to process compressed data from the journal and to transmit the processed data in a format suitable for a particular client, the data pump processing configuration including selecting a subset of data from the journal that is of interest to the particular client.

References

The Examiner relies on the following references as evidence of unpatentability:

| | | |
|-------|-----------------|--|
| Smith | US 6,965,895 B2 | Nov. 15, 2005 (filed Jul. 12, 2002) |
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| | | |
|----------|-----------------|--|
| O'Rourke | US 6,990,497 B2 | Jan. 24, 2006 (filed Jun. 26, 2001) |
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Rejections on Appeal

The Examiner rejects claims 1-5, 8-13, and 16 under 35 U.S.C. § 102(e) as being anticipated by Smith.

The Examiner rejects claims 6, 7, 14, and 15 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Smith and O'Rourke.

ISSUES

Based on our review of the administrative record, Appellants' contentions, and the findings and conclusions of the Examiner, the pivotal issues before us are as follows.

1. Does the Examiner err in finding the Smith reference discloses each feature of Appellants' claims, including: an "inserter controller" and a "data pump" (claim 1); gathering "inserter machine" data and "processing

compressed data from the journal and transmitting the processed data in a format suitable for a particular client” (claim 9); “each journal file stor[ing] data for a different mail run” (claim 2); and a “journal storage system stor[ing] machine data for a plurality of inserter machines and each data element is associated with a journal thread within the journal files” (claim 3)?

2. Does the Examiner err in finding the Smith and O’Rourke references collectively would have taught or suggested: a “data pump . . . configured to determine whether clients are currently active;” and “track . . . data . . . transmitted to each client, and . . . if a particular client goes offline, . . . to resume transmittal at a point where transmittal was interrupted” as recited in Appellants’ claims 6 and 7?

FINDINGS OF FACT (FF)

Smith Reference

1. Smith describes a system and method for monitoring (gathering) and analyzing information (data) generated in a factory, such as an integrated circuit fabrication factory. (Col. 1, ll. 18-22; col. 6, ll. 45-58.) The system and method automatically retrieves data from the integrated circuit fabrication machines (i.e., gathers machine data), manipulates (processes) the data, and formats the data for analysis by data mining tools. (Col. 6, ll. 45-58; col. 9, ll. 14-17; col. 11, ll. 8-17; col. 16, ll. 8-46.) Smith, in particular, describes a “Data Analysis” system (Figure 3, element 3000) including an Application Service Provider (ASP). The “ASP Data Transfer” module (Figure 3, element 3010) gathers different types of data from different data sources in the fabrication (manufacturing) process, including

“raw equipment data” from the fabrication machines. (Col. 8, l. 49 to col. 9, l. 44.)

2. Smith describes storing the gathered data in a compressed format. (Col. 12, ll. 56-60; col. 16, ll. 5-44.) Smith, in particular, describes translating “temporal-based data” from “individual processing (i.e., factory or assembly-line) tools” and “temporal-based operating condition data” utilizing a “Configuration file” that may direct the system to create a “Raw data archive file.” (Col. 11, l. 18 to col. 12, l. 59.) The “Raw data archive file” is an “archived copy of the original data,” and selecting this option in the “Configuration file” results “in the file being compressed, and stored in an archive directory structure.” (Col. 12, ll. 56-59.)

3. Smith describes processing and formatting data, including archived machine (fabrication or processing tool) data (col. 6, ll. 52-58; col. 12, ll. 56-59; col. 16, ll. 39-53), for analysis by data mining tools. (Col. 6, ll. 45-58; col. 9, ll. 14-17; col. 10, ll. 5-46; col. 11, ll. 8-17; col. 16, ll. 8-53.) The data may then be transferred (transmitted) to clients (customers) in client-dictated formats – ASP Data Transfer module (Figure 3, element 3010). (Col. 9, ll. 22-44.)

4. Smith describes “managing, referencing, and extracting” data in a relational database and file system – “Intelligence Base” (Figure 3, element 3050). (Col. 15, ll. 8-61.)

5. Smith also describes that the ASP Data Transfer module (3010) provides data to clients/users/customers (by, for example remote access) through a network. (Col. 8, ll. 18-19; col. 9, ll. 7-13, 42-44.)

O'Rourke Reference

6. O'Rourke describes transmitting or "streaming" data (e.g., digital multimedia content) between a server and a client in a networked client/server computer system. (Col. 1, ll. 6-16.) O'Rourke describes streaming the data in response to a user request or input. (Col. 9, ll. 48-60.)

7. O'Rourke also describes an interruption in the data transmission (streamed data), and resuming the data transmission (stream). (Col. 9, ll. 12-45; col. 10, ll. 17-37.)

ANALYSIS

Appellants separately argue the patentability of independent claims 1 and 9. (Br. 5-7.) Appellants argue claims 2-5, 8, 10-13, and 16 as a group. (Br. 7.) Similarly, Appellants argue claims 6, 7, 14, and 15 as a group with respect to the § 103 rejection. (Br. 7-8.) We accept Appellants' grouping of the claims, and choose independent claims 1 and 9, and dependent claims 2, 3, 6, and 7 as representative of Appellants' arguments and groupings. Accordingly, we treat Appellants' claims 4, 5, 8, and 10-16 as standing or falling with their respective representative base claims. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2007).

Rejection of claims 1-5, 8-13, and 16 under 35 U.S.C. § 102(e)

Appellants contend that the Smith reference fails to disclose a number of features of Appellants' independent claims 1 and 9 (Br. 5-7), and dependent claims 2 and 3 (Br. 7). The Examiner finds that the Smith reference discloses each feature of Appellants' independent claims 1 (Ans. 3-4) and 9 (Ans. 5), and dependent claims 2 and 3 (Ans. 4). The Examiner

also maintains that the claims are properly rejected as anticipated by Smith (Ans. 8-11). Accordingly, we decide the question of whether the Examiner erred in finding the Smith reference discloses: an “inserter controller” and a “data pump” (claim 1); gathering “inserter machine” data and “processing compressed data from the journal and transmitting the processed data in a format suitable for a particular client” (claim 9); “each journal file stor[ing] data for a different mail run” (claim 2); and a “journal storage system stor[ing] machine data for a plurality of inserter machines and each data element is associated with a journal thread within the journal files” (claim 3).

Claims 1 & 9 – “Inserter Controller” & “Inserter Machine” Data

Appellants contend that the Smith reference does not disclose “a system using an ‘inserter controller’ [(claim 1)] or a method for gathering ‘inserter machine’ data [(claim 9)], as recited in independent claims 1 and 9.” (Br. 5.) The Examiner finds that Smith discloses a module gathering machine data. (Ans. 8.)

After reviewing the record on appeal, we agree with the Examiner’s findings that Smith discloses a module gathering machine data, and that Appellants’ recited features – an “inserter controller” and gathering “inserter machine data” – read on Smith’s disclosure. We begin our analysis by construing Appellants’ claims.

We determine the scope of the claims in patent applications not solely based on the claim language, but upon giving claims “their broadest reasonable interpretation consistent with the [S]pecification” and “in light of the [S]pecification as it would be interpreted by one of ordinary skill in the art.” *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004)

(citations omitted). We note that, as a general proposition, merely reciting that device or module corresponds to a particular type of device or module, and that data corresponds to a particular type of data – e.g., an “inserter controller” and “inserter machine” data – as opposed to some other unique identifier, essentially constitutes non-functional descriptive material as it does not further limit the claimed invention either functionally or structurally. Such non-functional descriptive material does not patentably distinguish claims over the prior art that otherwise renders the claims unpatentable. *In re Ngai*, 367 F.3d 1336, 1339 (Fed. Cir. 2004).³

Appellants do not explicitly define an “inserter controller” in their Specification. Rather, Appellants define their “inserter controller” by the claim language in terms of its function – “gathering machine data.” (Br. 9, claim 1.)

Thus, we construe Appellants’ “inserter controller” to simply be a module (i.e., some device, computer program, or combination thereof) performing the delineated function of gathering data. The labeling of a module is a non-functional distinction as this “name” does not functionally distinguish the claim element from any other module performing the same function (gathering machine data).

Similarly, with respect to claim 9, labeling data (data gathered and transmitted from an inserter machine) as “inserter machine data” (in the

³ See also *Ex parte Nehls*, 88 USPQ2d 1883, 1887-89 (BPAI 2008) (precedential) (discussing cases pertaining to non-functional descriptive material); *Ex parte Mathias*, 84 USPQ2d 1276 (BPAI 2005), *aff’d* by *In re Mathias*, 191 Fed. Appx. 959 (Fed. Cir. 2006) (Rule 36, unpublished); *Ex parte Curry*, 84 USPQ2d 1272 (BPAI 2005) (informative), *aff’d* by *In re Curry*, No. 2006-1003 (Fed. Cir. 2006) (Rule 36, unpublished) (both cases treating data as nonfunctional descriptive material).

preamble) is a non-functional distinction as this “name” does not functionally distinguish the claimed data from any other type of data.

We also note that Appellants’ claim 9 does not recite “inserter machine” or “inserter machine data” in the body of the claim. Rather, claim 9 recites “inserter machine data” only in the preamble of the claim. A recitation in the preamble limits the claim only when it distinguishes the use of the claimed article from the prior art, *see Vita-Mix Corp. v. Basic Holding, Inc.*, 581 F.3d 1317, 1323-24 (Fed. Cir. 2009), and when it is “‘necessary to give life, meaning, and vitality’ to the claim” (i.e., it also appears in the body of the claim), *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (quoting *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999)).

Accordingly, after reviewing the record on appeal, we broadly but reasonably interpret the disputed feature of Appellants’ claim 1 – an “inserter controller gathering machine data” – to be a module gathering machine data. We interpret the disputed feature of Appellants’ claim 9 – “gathering predetermined machine data,” which Appellants’ contend is “inserter machine data” – to mean gathering machine data. Designating a module for gathering machine data as a controller, or specifically an inserter controller, and labeling data as inserter machine data does not patentably distinguish these features from the disclosure of the Smith reference.

Notwithstanding Appellants’ contrary arguments, we find the Smith reference describes the disputed features of Appellants’ claims 1 and 9 – i.e., gathering machine data utilizing a module. We agree with the Examiner (and also find) that the Smith reference discloses a system and method for

gathering machine data generated in a production facility or process, and in particular, a module for gathering such machine data. (FF 1.)

Claims 1 & 9 – “Data Pump,” “Processing Compressed Data,” and “Transmitting the Processed Data”

Appellants contend that the Smith reference does not disclose “the ‘data pump’ element [(claim 1)] or step for, ‘processing compressed data from the journal and transmitting the processed data in a format suitable for a particular client [(claim 9)].’” (Br. 5.) The Examiner finds that Smith discloses storing compressed data, and a module for processing and transmitting processed data in a client useable format. (Ans. 8-9.)

After reviewing the record on appeal, we agree with the Examiner’s findings that Smith discloses storing compressed data, as well as a module for processing and transmitting processed data in a client useable format. We also agree with the Examiner that Appellants’ recited features – a “data pump” and “processing compressed data . . . and transmitting the processed data” – read on Smith’s disclosure. We begin our analysis by construing Appellants’ claims.

As with the “inserter controller” discussed *supra*, labelling a module as a particular type of device or module – a “data pump” – essentially constitutes non-functional descriptive material. Appellants do not explicitly define a “data pump” in their Specification, but rather define the “data pump” by the claim language in terms of its function – “a data pump configured to process compressed data from the journal and to transmit the processed data in a format suitable for a particular client.” (Br. 9, claim 1.) Thus, we broadly but reasonably construe Appellants’ “data pump” to simply be a module performing the function of processing compressed data and transferring the processed data in a client useable format. Similarly,

with respect claim 9, we construe the method to include steps of storing machine data in a compressed format, as well as processing compressed data and transferring the processed data in a client useable format.

Notwithstanding Appellants' contrary arguments, we find the Smith reference describes the disputed features of Appellants' claims 1 and 9 – i.e., storing machine data in a compressed format, as well as a module processing compressed data and transferring the processed data in a client useable format. We agree with the Examiner that the Smith reference discloses storing gathered machine data in a compressed format – a compressed raw data archive file. (FF 2.) We also agree with the Examiner that the Smith reference discloses processing and formatting archived compressed machine data for analysis, and transferring (transmitting) the data to users in a format dictated by the users. (FF 3.) We further note that Smith discloses extracting a portion (subset) of the stored data for analysis (FF 3, 4; Smith, col. 6, ll. 53-57), which we find meets the additional limitation of “selecting a subset of data . . . that is of interest to the . . . client.” (Br. 9 (claim 1), 10 (claim 9).)

Claims 2 & 3 – “Mail Runs or Inserter Machines” & “Ways of Organizing”

Appellants contend that the Smith reference does not disclose “mail runs or inserter machines, or ways of organizing journal files around those criteria.” (Br. 7.) The Examiner finds that Smith discloses different sets of data, which the Examiner views as disclosing the disputed features of the claims. (Ans. 10.)

After reviewing the record on appeal, we find that the Smith reference discloses storing data for different production processes and machines in a file, and/or storing data for different production machines in a file so that

each data element is associated with an interrelationship (thread). We find that Smith's disclosures anticipate Appellants' disputed limitations – i.e., “organizing journal files around” “mail runs” and “inserter machines.” We begin our analysis by construing Appellants' claims.

As we previously discussed with respect to claims 1 and 9 *supra*, labeling data (data gathered for different mail runs or for a plurality of inserter machines) is a non-functional distinction (is non-functional descriptive material) as the “name” of the data or its source does not functionally distinguish the data from any other type of data stored and organized in the claimed manner. Appellants do not explicitly define a “journal storage system,” a “journal file,” or a “journal thread” in their Specification. Appellants do, however, explain that journal file may have a specific format (which is not claimed), may include information relating to a specific machine or a mail run (i.e., production process involving multiple machines), and may include contextual relationship information (a thread). (Spec. 7, l. 12 to 8, l. 5; 10, ll. 3-15.)

Thus, we broadly but reasonably construe Appellants' claim 2 – which recites that “the journal storage system includes journal files, wherein each journal file stores data for a different mail run” – to simply mean a storage system including files and each of the files is capable of storing data for a production process including multiple machines. We broadly but reasonably construe Appellants' claim 3 – which recites that “each data element is associated with a journal thread within the journal files” – to simply mean the storage system files may include data elements (differentiated data) that are associated (related) to other data by a predetermined contextual relationship (interrelationship or thread).

We find the Smith reference describes the disputed features of Appellants' claims 2 and 3 – i.e., a storage system including files storing data for a production process including multiple machines, including related data elements having a predetermined relationship. Smith discloses managing, storing, referencing, and extracting data from multiple machines in a relational database and file system. (FF 2, 4.) We find Smith's disclosure of managing, storing, referencing, and extracting data in a relational database and file system describes files including relational information or a "thread."

Thus, we find that the Smith reference discloses each feature of Appellants' independent claims 1 and 9, and dependent claims 2 and 3; and we note that Appellants' arguments are not commensurate with the scope of the recited limitations. Therefore, we are not persuaded by Appellants' contrary arguments that Smith does not disclose the disputed features of claims 1 and 9 (Br. 5-7), and claims 2 and 3 (Br. 7). Moreover, the Examiner provides detailed findings with respect to the Smith reference. (Ans. 3-5, 8-10.) Appellants did not file a Reply Brief, nor did Appellants provide any persuasive evidence supporting the assertions of alleged error in the Examiner's positions. Accordingly, Appellants have not persuaded us to find error in the Examiner's anticipation rejection of claims 1-5, 8-13, and 16. Therefore, we affirm the Examiner's rejections of claims 1-5, 8-13, and 16.

Rejection of claims 6, 7, 14, and 15 under 35 U.S.C. § 103(a)

Appellants contend that the Smith and O'Rourke references collectively do not teach or suggest features of Appellants' dependent claims

6 and 7. (Br. 7-8.) The Examiner finds that the Smith and O'Rourke references collectively would have taught or suggested the disputed features of Appellants' claims 6 and 7. (Ans. 6-7.) The Examiner further maintains that the claims are properly rejected as obvious in view of Smith and O'Rourke. (Ans. 11-12.) The Examiner also presents a rationale for combining the references. (Ans. 7.) Accordingly, we decide the question of whether the Examiner erred in finding the Smith and O'Rourke references collectively would have taught or suggested: a "data pump . . . configured to determine whether clients are currently active;" and "track . . . data . . . transmitted to each client, and . . . if a particular client goes offline, . . . to resume transmittal at a point where transmittal was interrupted" as recited in Appellants' claims 6 and 7.

After reviewing the record on appeal, we agree with the Examiner's findings that the O'Rourke reference describes determining whether a client is currently active and resuming data transmittal at a point where transmittal was interrupted, and the Examiner's conclusion that the Smith and O'Rourke references would have collectively taught the disputed features to a skilled artisan. The Examiner finds that O'Rourke describes streaming content in response to a user request or input from a user connected to the server (user is active), and resuming an interrupted data stream. (Ans. 8.) We find that O'Rourke describes transmitting or "streaming" data between a server and a client in a networked client/server computer system in response to a user request or input. (FF 6.) Transferring data in response to a user request or input necessarily requires a determination that the user makes the request or input, or in other words, that the user is active. We find O'Rourke also describes an interruption in the data transmission (streamed data), and

resuming the data transmission (stream). (FF 7.) We also find the Smith reference describes a data transfer module that provides remote access to data through a network by users/customers. (FF 5.) And, that the Examiner has articulated a rationale for combining the Smith and O'Rourke references (*see* Ans. 7) based on "some rational underpinning to support the legal conclusion of obviousness." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Thus, we conclude, as did the Examiner, that it would have been obvious to an ordinarily skilled artisan at the time of Appellants' invention to combine the Smith and O'Rourke references because determining whether a client is currently active and resuming data transmittal at a point where transmittal was interrupted would have improved data transfer reliability – "by not requiring uninterrupted availability" and "giv[ing] the user the advantage of not losing data if transmission is interrupted." (Ans. 7.) We also conclude that combining Smith's data analysis and transfer system with O'Rourke's data transmission scheme is tantamount to the predictable use of prior art elements according to their established functions – an obvious improvement. *See KSR*, 550 U.S. at 417.

We are also not persuaded by Appellants' argument that the references are not analogous art. (Br 8.) A reference is analogous art if "even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem." *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992); *see also KSR*, 550 U.S. at 420 ("[F]amiliar items may have obvious uses beyond their primary purposes."). We find that Smith and O'Rourke both

describe remote data transfer over a network (FF 5, 6.), and thus both relate to data transmission (streaming) – Smith and O’Rourke share a relevant “field of endeavor.”

Thus, we find that the Smith and O’Rourke references would have taught each feature of Appellants’ dependent claims 6 and 7. We are not persuaded by Appellants’ contrary arguments that the Smith and O’Rourke references collectively do not teach or suggest the disputed features of claims 6 and 7 (Br. 7-8). Moreover, the Examiner provides detailed findings and conclusions with respect to the Smith and O’Rourke references. (Ans. 3-7, 8-12.) Appellants did not file a Reply Brief, nor did Appellants provide any persuasive evidence supporting the assertions of alleged error in the Examiner’s positions. Accordingly, Appellants have not persuaded us to find error in the Examiner’s obviousness rejection of claims 6, 7, 14, and 15. Therefore, we affirm the Examiner’s rejections of claims 6, 7, 14, and 15.

CONCLUSION OF LAW

On the record before us, we find the Examiner did not err in finding the Smith reference discloses: (1) an “inserter controller” and a “data pump” (claim 1); (2) gathering “inserter machine” data and “processing compressed data from the journal and transmitting the processed data in a format suitable for a particular client” (claim 9); (3) “each journal file stor[ing] data for a different mail run” (claim 2); and (4) a “journal storage system stor[ing] machine data for a plurality of inserter machines and each data element is associated with a journal thread within the journal files” (claim 3). We also find the Examiner did not err in finding the Smith and O’Rourke references collectively would have taught or suggested: a “data pump . . . configured to

determine whether clients are currently active,” and “track . . . data . . . transmitted to each client, and . . . if a particular client goes offline, . . . to resume transmittal at a point where transmittal was interrupted.” Thus, on the record before us, we find the Examiner did not err in rejecting claims 1-16 under 35 U.S.C. §§ 102(e) and 103(a).

DECISION

We affirm the Examiner’s rejections of claims 1-5, 8-13, and 16 under 35 U.S.C. § 102(e).

We affirm the Examiner’s rejections of claims 6, 7, 14, and 15 under 35 U.S.C. § 103(a).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

rwk

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